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ABSTRACT

A study was made of the relationship between communication skills of young deaf adults and their success in employment as measured by their employers. The sample consisted of 62 employed deaf graduates of Pennsylvania educational institutions who finished school from 1970 to 1975. Employer ratings were made of their success in employment by completion of the Employer Survey (Pennsylvania School for the Deaf) and the Minnesota Satisfactoriness Scales (MSS). Communication skills were judged by trained interviewers as they collected data from the employees. A comparison was also made between the success in employment of the deaf workers and that of hearing workers by comparing the results of the MSS administered to the deaf workers with the norms listed in the MSS Manual. Three separate analyses failed to support the hypothesis that communication skills are related to success in employment and no significant difference was found between the success in employment of hearing workers and deaf workers. The student questionnaire, interview schedule, and employer survey are appended. (NJ)

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FINAL REPORT

THE RELATIONSHIP BETWEEN COMMUNICATION SKILLS OF YOUNG DEAF ADULTS AND THEIR SUCCESS IN EMPLOYMENT

(Project No. 19-6009)

Evelyn Blewitt

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ABSTRACT

TITLE: The Relationship Between Communication Skills of Young Deaf Adults and Their Success in Employment

AUTHOR: Evelyn Blewitt

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DATE: August, 1976

The purpose of this investigation was to study the relationship between communication skills of young deaf adults and their success in employment as measured by their employers. A comparison was also made between the success in employment of hearing impaired workers and that of hearing workers. The first stated purpose was studied by means of employer ratings of the deaf workers' successfulness in employment by completion of two separate questionnaires: The Employer Survey (Pennsylvania School for the Deaf) and the Minnesota Satisfactoriness Scales (MSS). Communication skills were judged by the trained interviewers as they collected the data from the employees. The second stated purpose was investigated by means of utilizing the results of the MSS administered to the deaf workers and the norms listed in the MSS Manual.

The sample included 62 employed, hearing impaired graduates of Pennsylvania educational institutions who finished school from 1970 to 1975 and who met the following criteria: a) I.Q. of 70 or above, b) no diagnosed psychosis; and c) had at least a 40 decibel loss for the speech range in the better ear.

The two hypotheses were 1) that there is a positive relationship between communication skills and success in employment of young deaf adults, and 2) that there is no significant difference between the success in employment of hearing workers and hearing impaired workers. Three similar analyses failed

to support the first hypothesis that communication skills are related to success in employment. The second hypothesis was supported by comparison of means and standard deviations of the job success of the hearing impaired population and the given norms for the hearing population.

The data presented seemed to indicate that the degree of communication skills in young deaf adults was not significantly related to their success in employment as measured by either the Employer Survey or the Minnesota Satisfactoriness Scales. It was also indicated that the hearing impaired workers' skill in using speech had little or no relationship to the successfulness of his employment. Deaf workers were rated by their employers as being equally successful at their jobs as hearing workers.

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CHAPTER I. INTRODUCTION

Statement of the Problem

The purpose of this study was to analyze the relationship between the communication skills of young deaf adults and their success in employment as rated by the employer. Specifically, the objectives of the study were to:

(1) determine the relationship between the job success of young deaf workers as measured by the Employer Survey (Pennsylvania School for the Deaf, 1972), and their communication skills as rated by trained interviewers.

(2) determine the relationship between the job success of young deaf adults and hearing workers as measured by the Minnesota Satisfactoriness Scales

Purpose of the Study

The ability of the deaf employee to communicate dictates to some extent the type of job maintained and success at that job. Adler commented on the effect of communication skills on the level of vocational success in the following quote:

> "It is obvious that competancy in communication and in language achievement are determinants of occupational status as well as the method of training and response to the employment situation. The more limited deaf person may not go beyond a given training or vocational level. In other words, the handicap of deafness is multiplied for deaf individuals who aspire to callings for which they do not qualify for reasons of communication ability and language competancy."

Adler stated that the occupational status of a deaf individual is normally determined by the competancy in speech, reading, speech-reading, and writing (Adler, 1970). Research on the relationship between communication skills and success in employment of hearing impaired graduates will help educators plan programs better suited to the needs and abilities of the

pupils, and help alleviate the difficulties in locating proper and successful employment.

Justification for the Study

Communication is the basis for all learning and social interaction. When there is a breakdown in the ability to communicate, many important aspects of a person's functioning are greatly affected. When deafness occurs at birth or in early childhood a severe communication handicap results. The extent of the disability depends upon the degree of hearing loss, the type of loss, the age of onset, time and quality of intervention, and any other handicaps which might be present. In turn, the deaf person's social and vocational status is dependent upon the successfulness of his attempts to overcome his handicap.

There is an urgent need to establish communication skills in the deaf at an early age, in order to provide them with an adequate means of exchange of information and knowledge. These avenues may be either oral (vocal-auditory), using speech, audition, and/or speechreading; manual, using one of the many forms of sign language, fingerspelling or writing; or a combination method (Total Communication). The degree of skill in communicating will dictate the extent of absorption of the deaf person into the social and economic mainstream (Boatner, et. al., 1964).

According to Guilfoyle (1973), one of the major goals in the education of the deaf was to prepare and assist the student in securing a job which he performs competently and receives some measure of satisfaction. The first stage in this process is prevocational development. Pre-vocational development covers the training of behaviors associated with the world of work.

The second, or vocational, stage is concerned with seeking a job, and with the actual job satisfaction and success (Guilfoyle, et. al., 1973).

Adequate communication is necessary for this training to occur. It is also extremely important in job interviews, on-the-job training, and relating to supervisors and co-workers.

There is a definite need in Pennsylvania for an extensive state-wide follow-up survey involving hearing impaired graduates from all types of educational facilities (residential schools, day schools and regular public school classes). A knowledge of the areas of employment at which deaf workers are most successful will be extremely valuable to vacational educators and employers of the deaf.

Limitations

(1) The population of this study is limited to hearing impaired residents of Pennsylvania and graduates of Pennsylvania educational institutions from 1970 to 1975.

(2) The subjects must also meet the following criteria:

   a. obtain an I.Q. score of 70 or above on standardized intelligence tests;

   b. present no diagnosed psychoses; and

   c. have at least a 40 decibel loss for the speech range in the better ear.

Definition of Terms

The following terms are used in this study:

(1) hearing impairment - "a generic term indicating a hearing disability which may range in severity from mild to profound; it includes the subsets of deaf and hard of hearing." (Ad Hoc Committee, 1975)

(2) Hearing impaired - one who has a hearing impairment; for the purpose of this study, one who has at least a 40 decibel

hearing loss for the speech range in the better ear.

(3) oral method - that type of communication which employs speech, audition, and often speech reading.

(4) Total Communication - that communication which makes use of all available communication forms; including audition, reading, speech reading, writing, formal sign language, fingerspelling, gestures, and speech.

(5) Manual method - that type of communication which employs sign language and/or fingerspelling.

(6) sign language - a method of communicating thoughts by the use of gestures created by the arms and hands.

(7) fingerspelling - a method of communication using standard, fixed, one-handed positions representing the letters of the alphabet, A through Z.

(8) speech reading - understanding a speaker's thoughts by attentively observing the movements of his lips, face and entire body.

(9) audition - making use of a person's hearing, with or without a hearing aid, to comprehend speech.

Hypothesis

(1) There is a positive relationship between communication skills and success in employment of young deaf adults.

(2) There is no significant difference between the success in employment of hearing workers and hearing impaired workers.

This study was designed to investigate the possible influence of communication upon the success in employment of hearing impaired graduates in Pennsylvania.

CHAPTER II. REVIEW OF RELATED RESEARCH

The review of related literature indicated a lack of information directly connected with the investigation of the relationship between success in employment and communication skills in young deaf adults. There were a number of similar follow-up studies of young deaf adults concerning employment and communication used at work.

The bulk of the surveys was interested in the method of communication used by the deaf employee; i.e. speech, speech reading, writing, fingerspelling, and gestures; rather than the skill in his natural means of communication. One of the earliest studies was conducted by Lunde and Bigman (19[illegible]). This research revealed that deaf professionals used speech more than any other group (skilled, semi-skilled, unskilled). More methods of communication were used by teachers and professionals, and fewer were evident as the occupational scale lowered. More than 50 % of professional workers used lipreading and writing. Signing was used least by clerical and sales workers and most by service workers and laborers.

In another follow-up study in 1963, Justman and Moskowitz found that, while on the job, the deaf employees had to use speech almost all of the time or part of the time. The usual means of communication of most of the graudates was speech (Justman and Moskowitz, 1963).

In 1965, Crammatte investigated the characteristics of deaf people successfully performing in their professions. He found that the professional group was speech-oriented. Nearly two-thirds used speech as the primary means of expressive communication with their hearing co-workers. An additional 20% used speech as a second choice, making a total of 83.9% of professional deaf workers who used speech while on the job. More than half of the workers used lip reading as their most frequent means of reception while 28.5% used it as a second

means of receptive communication. It was also revealed that 70% of the workers chose the manual method while communicating with deaf associates (Crammatte, 1965).

In a similar investigation, Prince studied deaf males in a work setting through personal observations. The breakdown of all communication acts which he observed and recorded was: 38% of the workers used the oral method; 43.6% gesture; 1.6% written; and 15.8% oral-gesture. It was mentioned that many workers had a poor prognosis for adequate oral communication while in school. It was found that since they relied heavily upon the use of speech and speech reading at work, they appeared to use the oral method more often and more effectively. The two major conclusions were that (1) language acquisition does not become static with graduation from school, and (2) restricted communication skills do not necessarily isolate deaf workers from their hearing peers (Prince, 1967).

Rosenstein and Lerman (1963) reported that 44% of deaf female workers used speech all of the time in communication with hearing employers and supervisors, 37% used speech most of the time and writing some of the time, while 23% used writing as the major means of communication. Severe communication difficulties while on the job were found in only 4% of the deaf women.

Kronenberg and Blake (1966) conducted a study of the occupational status of the young deaf adults in the southwest. They found that 52% of the respondents communicated with their immediate supervisors primarily through verbal means, 16% used non-verbal means, and 32% used a combination of both. It was noted that females appeared to be more verbal than males.

In the study of the interaction of the deaf and the hearing in Frederick County, Maryland, Furfey and Harte (1964) concluded that writing was the most dependable method of communication used by deaf people on the job. Many of

those who preferred writing were well equipped to use speech and manual communication as the situation determined.

A comprehensive follow-up study of the deaf in Toronto, Ontario, conducted recently by Reich and Reich (1974), reported that signing, fingerspelling, and Total Communication were the primary vehicles of communication for 80% of their deaf respondents. Speech skills of the deaf were found to be inadequate, especially in situations of great importance or urgency. The deaf related that only 50% of what they said could be comprehended by a hearing person, and they, in return, could understand only 50% of what hearing people said.

Most of the studies which mentioned communication skills of deaf employees, also commented upon their success in employment. In the comprehensive survey of occupational conditions among 10,101 deaf adults, Lunde and Bigman (1959) reported that job stability and job satisfaction were high. Rosenstein and Lerman (1963) found that the deaf female respondents "apparently performed quite adequately on the job and had made appropriate adjustments to the situations in which they worked."

In 1964, Boatner, Stuckless, and Moores conducted a follow-up study to investigate the occupational status of young deaf adults in New England. They reported that 95% of the immediate supervisors considered their deaf employees to be average, or better than average, in their job performance; but saw little chance for advancement for them without further vocational or technical training (Boatner, Stuckless, and Moores, 1964). Kronenberg and Blake (1966) indicated that only 7% of the deaf workers were below average in their job performance. The remaining employees tended to perform well in their work.

Furfey and Harte (1968) reported that deaf people are stable and reliable and that employers are uniformly satisfied with their work. Similar results

were found by most studies investigating these same facets.

A definition of job success was discussed in a follow-up study of auditorially, visually, and orthopedically handicapped pupils in Cincinnati. Prisuta (1970) stated that:

> "Employers indicated that personal characteristics, such as desirable reaction to criticism, getting along well with other employees, being on time for work, memory for directions, work effort, and attention to company regulations were the primary requisites for occupational success."

According to these standards, employers were well satisfied with the job success of the deaf workers. The employees were able to meet the expectations of the employers regarding personality requirements (Prisuta, 1970).

In an employment analysis of deaf workers in Texas, it was indicated that those deaf persons who had lost their jobs were discharged for social reasons (personality and adjustment) rather than for occupational reasons (lack of skill) (Texas School for the Deaf, 1972). Reich and Reich (1974) discovered that deaf employees earn considerably less salaries, and have less opportunity for advancement as compared to the norms for the hearing population.

Research on the Minnesota Satisfactoriness Scales (Gibson, et.al.) has given normative data with which to compare the main facets of employment success in the deaf to his hearing co-workers. It was developed from supervisor rating of 2,373 workers. Norms are available from five occupational groups: Professional, Managerial, and Technical; Clerical and Sales; Service; Machine Trades and Bench Work; and Workers-in-general. A two year study provided evidence for validity of the MMS. The five MMS scales showed a median internal consistency reliability of .87.

Communication skills are related to employment in many ways: locating employment, occupational adjustment, underemployment, type of employment; job

stability, job satisfaction, and job success. Because of this widespread relationship, many researchers have stated the need for greater development of communication skills as part of the deaf student's pre-vocational training.

Furfey and Harte (1968) stated that better preparation in communication skills, educational achievement, and vocational and technical skills is essential. This enables deaf persons to aspire for occupations for which they have potential. It was concluded by Rosenstein and Lerman (1965) that vocational and technical schools for the deaf need to develop language, communication, and occupational awareness in their deaf students.

In a three year project reported by Vaughn (1967), certain techniques were employed to help overcome the problem of limited communication in existing educational facilities for the hearing impaired.

> "The project demonstrated that important vocational rehabilitation goals may be achieved by qualifying deaf and hard of hearing students at existing facilities for the normally hearing when their communication and learning needs are met. An interesting outcome was the increased motivation of the subjects to achieve communication skills because of the need to cope with a normally hearing environment." (Vaughn, 1967)

Kronenberg and Blake (1966) found communication to be the most mentioned job related problem resulting from deafness, as noted by the supervisors of deaf employees. "Most difficulties were considered inconveniences rather than significant problems." It was reported by Quigley (1964) that most deaf persons were employed in skilled and semi-skilled employment. It was also noted that difficulty in communication was listed as one of the major barriers of the deaf in finding employment.

A similar statement was made by Gellman (1967). He reported that one of the early life experiences which caused atypical vocational development in the deaf was the problem of communication. This often resulted in limited knowledge of and exposure to various work roles and settings.

In a study of employer ratings of certain occupations for deaf persons, Pino (1970) discussed the occupational status of deaf persons and attributed the differences to factors of communication. Walker (1968) found that those deaf individuals who communicated by writing or by the manual method had better job stability than those who communicated orally. Stahler (1969) commented that underemployment of the deaf was the result of many factors, one of which was communication (Jones, 1969).

Summary

Research has shown that most hearing impaired employees have tended to perform well in their jobs. Employers of the deaf have been generally satisfied with their work. Most studies revealed that one of the major difficulties facing deaf employees was limited communication. It is obvious that there is a lack of research on the topic of success in employment and how it relates to a deaf person's skill in communicating. It is the purpose, then, of this study to investigate this relationship.

CHAPTER III. METHODS

Introduction

This chapter discusses the methods used in the selection of experimental and reference groups, the measurement instruments used, the procedures of the study, and the statistical designs utilized in this research.

Selection of Experimental and Reference Groups

All employed, hearing impaired graduates of Pennsylvania educational institutions between 1970 and 1975 were considered to be eligible for this study. Graduates from Pennsylvania School for the Deaf, Western Pennsylvania School for the Deaf, Pennsylvania State Oral School for the Deaf, intermediate units, and private schools were included in the population.

Measurement Instruments

The following measurements were selected to be used in analyzing the population for this study:

Primary Sources

Communication Skills Scale

A three point rating scale which had a range of three (very articulate, excepticnally good) to one (very hard to comprehend, poor communication skills) was used by the interviewers during the interview with the graduate. The general ability of the graduates to communicate was judged. The total scores ranged from three to one: good - 3; average - 2; poor - 1. Only the graduates' major means of communication and degree of skill with that method was evaluated.

Employer Survey

A three point rating scale of good - 3; average - 2; and below average - 1 were used in rating the job success of the deaf graduates in comparison to normal workers, as judged by the employers. The nine areas analyzed were:

(a) quality of work - how well the work is done

(b) quantity of work - how much work is produced

(c) handling of equipment - how well the employer uses his machinery and other equipment in performing his job

(d) attention to work - how well the worker concentrates during work

(e) attitude toward supervisors - how the worker regards his superiors

(f) attitude toward work and initiative - how the worker regards his job and is determined to do well

(g) relations with co-workers - how well the worker gets along with his fellow workers

(h) accident rate - how often the worker is involved in accidents while at work

(i) absenteeism - how often the worker is away from work

The raw score for all nine items ranges from a low of 9 to a high of 27.

Minnesota Satisfactoriness Scales is a 28 item questionnaire designed to be completed by a worker's supervisor. The MSS is scored on five scales representing different aspects of satisfactoriness. They are: General Satisfaction, Performance, Conformance, Dependability, and Personal Adjustment. Percentiles are availabel to correspond to raw scores. In general, percentile scores of 75 or above indicate highly satisfactory ratings on the scales concerned. Percentile scores of 25 or below indicate poor satisfactoriness. Percentile scores between 26 and 74 represent average satisfactoriness. The raw score has a range of 58; from 28 to 85.

Secondary Sources

Educational History Form (Powers, Lewis, 1975) contains information concerning levels of hearing loss, communication, intelligence, and other areas. This was completed by the educational institutions before the interviews took

place.

Student Questionnaire (Powers, Lewis, 1975) relates to the area of employment and training as seen by the graduate. With the help of the trained interviewers, the deaf graduates use this extensive form to answer questions pertaining to their:

1) personal information
2) social adjustment
3) educational program
4) employment
5) communication
6) locating a job
7) job success
8) job satisfaction

Communication skills are rated in Item 16 of this form.

Procedures

The concept of this investigation originated from a federally funded research project directed by Dr. Gerald Powers, Speech and Hearing Professor, Bloomsburg State College, through the Pennsylvania Department of Education (PDE) entitled "A Follow-up Study of Hearing Impaired Graduates in Pennsylvania from 1970-75." Interviews with Dr. Powers and James Lewis, Research Associate for this project, Research Coordinating Unit, PDE, resulted in the development of the topic of this study. A need was clearly demonstrated to examine the relationship between a hearing impaired person's skill in communicating and his success in employment. Both elements were being ascertained in the state-wide project, but not researched or analyzed to any extent.

A proposal for a mini-grant in relationship with the Bloomsburg project was researched, written, and submitted to the PDE in November 1975. The grant was funded the following January. Consultation concerning the design and procedures of this study was given by Mr. John Degler, Vocational Director, Pennsylvania School for the Deaf; and Mr. Don Gallion, Counselor for the Deaf,

Bureau of Vocational Rehabilitation.

A letter was sent by Dr. Powers to all educational institutions of the deaf and intermediate units, inviting them to participate in the project. Enclosed with the letters were Educational History Forms (APPENDIX A) to be completed for those hearing impaired persons meeting the following criteria:

(a) obtain an I.Q. score of 70 or above on standardized intelligence tests;

(b) present no diagnosed psychoses; and

(c) have at least a 40 decibel loss for the speech range in the better ear.

A list was then established comprising eligible students having completed their academic or vocational program during the period of June 1970-75.

Under the new confidentiality laws, the Pennsylvania Department of Education may collect data on students' educational history providing the information will be analyzed on a collective basis and no individual or agency be named in the study.

In order to comply with these laws, sample letters of permission (APPENDIX B) were also enclosed in the packets. These were to be prepared on the letterhead of the particular educational agency and mailed to the students requested in the survey. These same persons were interviewed face to face by the project staff at a later date. Only the students who complied with the request were interviewed.

The data was collected by six qualified interviewers, all having had a great deal of experience working with the deaf and proficient in manual communication. They called on each student and his employer to explain the project purpose and assure confidentiality as described above. Every attempt was made to contact each subject and employer in order to persuade them to participate.

Appointment were made to assure personal interviews with the deaf workers and their employers. Immediate supervisors were interviewed when possible, since they were also in a position to evaluate the employees. The employers were instructed to complete the Employer Survey (PSD, 1972) in the presence of the interviewer. If time allowed, the Minnesota Satisfactoriness Scales were also completed. Communication skills were judged during the interviews with the deaf workers by the project staff.

Face to face interviews were held in the following manner:

(1) Students and employers were given separate copies of the questionnaires.

(2) Items were communicated manually to low functioning deaf students. The interviewers filled in all the data on the Student Questionnaire (APPENDIX C).

(3) Reasons for missing data were requested.

(4) Employer or supervisor filled in the data on the Employer Survey (APPENDIX D) and the Minnesota Satisfactoriness Scales, an optional form (APPENDIX E).

(5) All recommendations or comments were recorded.

(6) Completed forms were sent to Bloomsburg State College.

The data was given to the Pennsylvania School for the Deaf for processing and computer analysis.

Statistical Design

The following three statistical procedures were used in this study:

Product-Moment Correlation - for use in determining the relationship between communication skills in young deaf adults and their success in employment. The product-moment correlation is usually the best statistic to use when the degree of relationship existing between two continuous variables is being analyzed. This correlation is expressed by the letter r. The magnitude of r ranges from a perfect positive relationship (r=+1.00) to a perfect negative

relationship (r=1.00). The following coefficient or correlation may be discovered by using the following formula:

$$r = \frac{\Sigma XY - \left[\frac{(\Sigma X) \times (\Sigma Y)}{N}\right]}{\left[\Sigma X^2 - \frac{(\Sigma X)^2}{N}\right] \left[\Sigma Y^2 - \frac{(\Sigma Y)^2}{N}\right]}$$

where X = the score on the first variable

Y = the score on the second variable

N = the number of pairs involved

Σ = the sum of (Downie and Heath, 1959)

(2) The Mean - used in calculating a t-test. The sum of all of the separate scores divided by the total number of scores is the mean (M). In most situations, the mean is the best measure of central tendency. It is used most frequently with other statistical measures.

The mean can be found by the use of the following formula:

$$M = \frac{\Sigma fX}{N}$$

where ΣfX = the sum of the products of each score multiplied by the frequency with which it occurs

N = the number of cases

The mean of X would be denoted by $\overline{X}$,

(3) T-Test - for use in analyzing the difference between the success in employment of hearing workers and deaf workers, using the Minnesota Satisfactoriness Scales. This statistic is used in determining whether or not there is a significant difference between the means of each group. "t" can be found by using the following formula:

$$t = \frac{\overline{Y} - \overline{X}}{\sqrt{\text{Var.} \times \left[\frac{N_x + N_y}{(N_x)(N_y)}\right]}}$$

where $\overline{X}$ = the mean of the scores of the first group

$\overline{Y}$ = the mean of the scores of the second group

N_x = number of cases in the first group

N_y = number of cases in the second group

Var. = Variance

$$\text{Var.} = \frac{\left[(N_1 - 1)(S_1)\right] + \left[(N_2 - 1)(S_2)\right]}{(N_1 + N_2) - 2}$$

where S = Standard Deviation

$$S = \sqrt{\frac{\Sigma x^2}{N}}$$

where $\Sigma x^2 = \Sigma fx^2 - \left[\frac{(\Sigma fx)^2}{N}\right]$

CHAPTER IV. FINDINGS

Introduction

A description of the procedures used in cotaining and analyzing the results of this study, and the presentation of the statistical findings are presented in this chapter. The analyses made were the relationship between communication skills and job success, and the comparison of job success in deaf and hearing workers.

Procedural Analysis

The interviewers obtained all necessary information after receiving written permission from the students. Employers were contacted and asked to complete the Employer Survey (PSD) and a similar optional form, the Minnesota Satisfactoriness Scales (Gibson et.al., 1970). The interviewers also met with each student to administer the Student Questionnaire. This form contains thrity items which gather information on the areas of vocational training, finding a job, employment, and communication. During the conference, the students' ability to communicate in each of the following areas was judged by the interviewer and recorded in item 16:

manual communication
speech reading
speech
writing
hearing
gestures

Each area used by the student was given a score of 1,2, or 3; indicating poor, average, or good ability; respectively. Since some students received scores on all six items, and others 5 or less; it was necessary to find the average score for each student. The overall scores ranged from 1 to 3; being an average of the individual marks on any number of the six items.

As the data was completed for each student, it was sent to the Pennsylvania School for the Deaf (PSD). There, it was organized and recorded on data preparations worksheets for use in computor analysis.

Presentation of Data

Three separate analyses were conducted in an effort to support the first hypothesis dealing with the relationships between communication skills and job success. The statistical procedures used correlated these three relationships.

The first analysis correlated the overall communicating ability (question 15 on the Student Questionnaire) and the success in employment using the results of the Employer Survey (question 5). The data in TABLE I does not support the hypothesis that there is a significant, positive relationship between communication skills and success in employment in young deaf adults. The r of -.128 indicated a weak negative relationship between communication skill and job success.

The second analysis was conducted using the same communication skill scores and the results of the Minnesota Satisfactoriness Scales, which also measures job success. The data in TABLE II does not sustain the first hypothesis. The r of .137 still indicates a very weak relationship between communication skill and job success.

The third similar analysis was done using only the score from the area of speech (not the overall communication score) and the results of the Minnesota Satisfactoriness Scales. The r of .16 is indicated in TABLE III. This suggested that the first hypothesis was not sustained for this particular element, either. There is still no indication of any relationship between communication skills and success in employment.

TABLE I

COMMUNICATION SKILLS (X) AND SUCCESS IN EMPLOYMENT EMPLOYER SURVEY (Y)

STUDENT	X	Y	XY	X^2	Y^2
1	2.2	26	57.2	4.84	676
2	2	27	54	4	729
3	1.5	27	40.5	2.25	729
4	2.8	26	72.8	7.84	676
5	2.3	25	57.5	5.29	625
6	1.3	26	33.8	1.69	676
7	2.2	22	48.4	4.84	484
8	2.2	21	46.2	4.84	441
9	2.7	26	70.2	7.29	676
10	2.2	20	44	4.84	400
11	2.2	27	59.4	4.84	729
12	2.3	26	59.8	5.29	676
13	1.8	22	39.6	3.24	484
14	2.5	18	45	6.25	324
15	2.7	23	62.1	7.29	529
16	1.8	23	41.4	3.24	529
17	2	24	50	4	625
18	2.5	18	45	6.25	324
19	3	26	78	9	676
20	2.5	27	67.5	6.25	729

TABLE I - Continued

STUDENT	X	Y	XY	X^2	Y^2
21	1.8	22	39.6	3.24	484
22	2	18	36	4	324
23	1.3	26	33.8	1.69	676
24	2.5	27	67.5	6.25	729
25	2.5	26	65	6.25	676
26	1.8	26	46.8	3.24	676
27	1.7	22	37.4	2.89	484
28	1.8	21	37.8	3.24	441
29	1.3	18	23.4	1.69	324
30	2	19	38	4	361
31	1.3	27	35.1	1.69	729
32	2	22	44	4	484
33	1.3	18	23.4	1.69	324
34	2.3	26	59.8	5.29	676
35	2	27	54	4	729
36	2.7	23	62.1	7.29	529
37	2.8	23	64.4	7.84	529
38	2.6	21	54.6	6.76	441
39	2.3	27	62.1	5.29	729
40	2.2	22	48.4	4.84	484

TABLE I - Continued

STUDENT	X	Y	XY	X^2	Y^2
41	3	20	60	9	400
42	1.8	27	48.6	3.24	729
43	2	22	44	4	484
44	2.3	27	62.1	5.29	729
45	2.5	26	65	6.25	676
46	2.5	20	50	6.25	400
47	2	27	54	4	729
48	2.3	27	62.1	5.29	729
49	3	27	81	9	729
50	2.5	27	67.5	6.25	729
51	2.2	26	57.2	4.84	676
52	2.5	25	62.5	6.25	625
53	2.5	27	67.5	6.25	729
54	1.5	18	27	2.25	324
55	2.3	25	57.5	5.29	625
56	2	18	36	4	324
57	1.5	26	39	2.25	676
58	2	20	40	4	400
59	2.5	27	67.5	6.25	729
60	2.2	18	39.6	4.84	324
61	2.2	27	62.1	5.29	729
62	2.3	24	55.2	5.29	576
	134.6	1482	3211	303.9	35,637

TABLE I - Continued

$$r = \frac{\Sigma XY - \left[\frac{(\Sigma X) \times (\Sigma Y)}{N}\right]}{\sqrt{\left[\Sigma X^2 - \frac{(\Sigma X)^2}{N}\right]\left[\Sigma Y^2 - \frac{(\Sigma Y)^2}{N}\right]}}$$

$$r = \frac{3211 - \left[\frac{(134.6) \times (1482)}{62}\right]}{\sqrt{\left[303.9 - \frac{(134.6)^2}{62}\right]\left[35637 - \frac{(1482)^2}{62}\right]}}$$

$$r = \frac{3211 - \left[\frac{199,477.2}{62}\right]}{\sqrt{\left[303.9 - \frac{18,117.2}{62}\right]\left[35,637 - \frac{2,196,324}{62}\right]}}$$

$$r = \frac{3211 - 3217.4}{\sqrt{(303.9 - 292.2)\ (35,637 - 35,424.58)}}$$

$$r = \frac{- 6.4}{\sqrt{(11.7)\ (212.4)}}$$

$$r = \frac{- 6.4}{\sqrt{2485}}$$

$$r = \frac{- 6.4}{50}$$

$$r = - .128$$

TABLE II

COMMUNICATION SKILLS (X) AND SUCCESS IN EMPLOYMENT MINNESOTA (Y)

STUDENT	X	Y	XY	X^2	Y^2
1	2	77	154	4	5929
2	1.5	70	105	2.25	4900
3	2.8	79	221.1	7.84	6241
4	2.3	59	135.7	5.29	3481
5	1.3	70	91	1.69	4900
6	2.2	65	143	4.84	4225
7	2.2	73	160.6	4.84	5329
8	2.7	73	197.1	7.29	5329
9	2.2	62	136.4	4.84	3844
10	2.2	79	173.8	4.84	6241
11	1.8	60	108	3.24	3600
12	2.5	54	135	6.25	2916
13	2.7	62	167.4	7.29	3844
14	1.8	64	115.2	3.24	4096
15	2	64	128	4	4096
16	2.5	56	140	6.25	3136
17	3	60	180	9	3600
18	1.8	52	93.6	3.24	2704
19	2	57	114	4	3249
20	1.3	55	71.3	1.69	3025

TABLE II - Continued

STUDENT	X	Y	XY	X^2	Y^2
21	2.5	77	192.5	6.25	5929
22	2.5	56	140	6.25	3136
23	1.8	81	145.8	3.24	6561
24	1.7	66	112.2	2.89	4356
25	1.8	53	95.4	3.24	2809
26	1.3	49	63.7	1.69	2401
27	2	60	120	4	3600
28	1.3	67	87.1	1.69	4489
29	2	60	120	4	3600
30	1.3	53	68.9	1.69	2809
31	2.3	69	158.7	5.29	4761
32	2	59	118	4	3481
33	2.7	69	186.3	7.29	4761
34	2.8	64	179.2	7.84	4096
35	2.6	53	137.8	6.76	2809
36	2.3	84	193.2	5.29	7056
37	2.2	63	138.6	4.84	3969
38	3	52	156	9	2704
39	1.8	64	115.2	3.24	4096
40	2	69	138	4	4761

TABLE II - Continued

STUDENT	X	Y	XY	X^2	Y^2
41	2.3	64	147.2	5.29	4096
42	2.5	60	150	6.25	4600
43	2.5	64	160	6.25	4096
44	2	68	136	4	4624
45	2.3	62	142.6	5.29	3844
46	3	61	183	9	3721
47	2.5	69	172.5	6.25	4761
48	2.2	65	143	4.84	4225
49	2.5	74	185	6.25	5476
50	2.5	77	192.5	6.25	5929
51	2.3	71	163.3	5.29	5041
52	2	59	118	4	3481
53	2	53	106	4	2809
54	2	63	126	4	3969
55	2.2	55	121	4.84	3025
56	2.3	71	163.3	5.29	5041
	121.8	3595	7846.5	275.4	234,607

TABLE II - Continued

$$r = \frac{\Sigma XY - \left[\frac{(\Sigma X) \times (\Sigma Y)}{N}\right]}{\sqrt{\left[\Sigma X^2 - \frac{(\Sigma X)^2}{N}\right]\left[\Sigma Y^2 - \frac{(\Sigma Y)^2}{N}\right]}}$$

$$r = \frac{7846.5 - \left[\frac{(121.8)\ (3595)}{56}\right]}{\sqrt{\left[275.4 - \frac{(121.8)^2}{56}\right]\left[234,607 - \frac{(3595)^2}{56}\right]}}$$

$$r = \frac{7846.5 - \left[\frac{437,871}{56}\right]}{\sqrt{\left[275.4 - \frac{14,835.2}{56}\right]\left[234,607 - \frac{12,924,025}{56}\right]}}$$

$$r = \frac{7846.5 - 7819.1}{\sqrt{(275.4 - 264.9)\ (234,607 - 230,786.2)}}$$

$$r = \frac{27.4}{\sqrt{(10.5)\ (3820.8)}}$$

$$r = \frac{27.4}{\sqrt{40118.4}}$$

$$r = \frac{27.4}{200.3}$$

$$r = .137$$

TABLE III

COMMUNICATION SKILLS SPEECH (X) AND SUCCESS IN EMPLOYMENT [MINNESOTA] (Y)

STUDENT	X	Y	XY	X^2	Y^2
1	1	77	70	1	5929
2	1	70	70	1	4900
3	3	79	237	9	6241
4	2	59	118	4	3481
5	1	70	70	1	4900
6	1	65	65	1	4225
7	2	73	146	4	5329
8	3	73	219	9	5329
9	3	62	186	9	3844
10	2	79	158	4	6241
11	2	60	120	4	3600
12	3	54	162	9	2916
13	3	62	186	9	3844
14	1	64	64	1	4096
15	2	64	128	4	4096
16	3	56	168	9	3136
17	3	60	180	9	3600
18	1	52	52	1	2704
19	2	57	114	4	3249
20	1	55	55	1	3025

TABLE III - Continued

STUDENT	X	Y	XY	X^2	Y^2
21	3	77	231	9	5929
22	3	56	168	9	3136
23	1	81	81	1	6561
24	1	66	66	1	4356
25	1	53	53	1	2809
26	1	49	49	1	2401
27	2	60	120	4	3600
28	1	67	67	1	4489
29	1	60	60	1	3600
30	1	53	53	1	2809
31	2	69	138	4	4761
32	1	59	59	1	3481
33	3	69	207	9	4761
34	3	64	192	9	4096
35	3	84	252	9	7056
36	1	63	63	1	3969
37	1	64	64	1	4096
38	1	69	69	1	4761
39	1	64	64	1	4096
40	2	60	120	4	3600

TABLE III - Continued

STUDENT	X	Y	XY	X^2	Y^2
41	2	64	128	4	4096
42	1	68	68	1	4624
43	2	62	124	4	3844
44	2	69	138	4	4761
45	2	65	130	4	4225
46	2	74	148	4	5476
47	1	71	71	1	5041
48	1	59	59	1	3481
49	1	53	53	1	2809
50	1	63	63	1	3969
51	2	55	110	4	3025
52	2	71	142	4	5041
	92	3352	5985	196	219,443

TABLE III - Continued

$$r = \frac{\Sigma XY - \left[\frac{(\Sigma X) \times (\Sigma Y)}{N}\right]}{\sqrt{\left[\Sigma X^2 - \frac{(\Sigma X)^2}{N}\right]\left[\Sigma Y^2 - \frac{(\Sigma Y)^2}{N}\right]}}$$

$$r = \frac{5985 - \left[\frac{(92)\ (3352)}{62}\right]}{\sqrt{\left[196 - \frac{(92)^2}{62}\right]\left[219{,}443 - \frac{(3352)^2}{62}\right]}}$$

$$r = \frac{5985 - \left[\frac{308{,}384}{52}\right]}{\sqrt{\left[196 - \frac{8464}{52}\right]\left[219{,}443 - \frac{11{,}235{,}904}{62}\right]}}$$

$$r = \frac{5985 - 5930.5}{\sqrt{(196 - 162.8)\ (219{,}443 - 216{,}075.1)}}$$

$$r = \frac{54.5}{\sqrt{(33.2) \times (3367.9)}}$$

$$r = \frac{54.5}{\sqrt{111{,}814.32}}$$

$$r = \frac{54.5}{334.4}$$

$$r = .16$$

TABLE IV

SUCCESS IN EMPLOYMENT OF HEARING IMPAIRED (X) AND NORMAL HEARING (Y)

STUDENT	X	STUDENT	X	STUDENT	X
1	77	18	52	35	84
2	70	19	57	36	63
3	79	20	55	37	64
4	59	21	77	38	69
5	70	22	56	39	64
6	65	23	81	40	60
7	73	24	66	41	64
8	73	25	53	42	68
9	62	26	49	43	62
10	79	27	60	44	69
11	60	28	67	45	65
12	54	29	60	46	74
13	62	30	53	47	71
14	64	31	69	48	59
15	64	32	59	49	53
16	56	33	69	50	63
17	60	34	64	51	55
				52	71

$\overline{X}$ = 64.4 S_x = 10.97 fx^2 = 6267 (fx) = 25 N = 52

n norms for Minnesota Workers in General) $\overline{Y}$ = 65.75 S_y = 10.96 SEM = 2.79 N = 1000

TABLE IV - Continued

X	f	x	fx	$(fx)^2$
49	1	-15	-15	225
52	1	-12	-12	144
53	3	-11	-33	1089
54	1	-10	-10	10J
55	2	-9	-18	324
56	2	-8	-16	256
57	1	-7	-7	49
59	3	-5	-15	225
60	5	-4	-20	400
62	3	-2	-6	36
63	2	-1	-2	4
64	6	0	0	0
65	2	+1	+2	4
66	1	+2	+2	4
67	1	+3	+3	9
68	1	+4	+4	4
69	4	+5	+20	400
70	2	+6	+16	256
71	2	+7	+14	196
73	2	+9	+18	324
74	1	+10	+10	100
77	2	+13	+23	529
79	2	+15	+30	900
81	1	+17	+17	289
84	1	+20	+20	400
	52		+25	6267

TABLE IV - Continued

$$\Sigma x^2 = \Sigma fx^2 - \left[\frac{(\Sigma fx)^2}{N}\right]$$

$$\Sigma x^2 = 6267 - \frac{25^2}{52}$$

$$\Sigma x^2 = 6267 - \frac{625}{52}$$

$$\Sigma x^2 = 6267 - 12$$

$$\Sigma x^2 = 6255$$

$$\text{Standard deviation}_x = \sqrt{\frac{\Sigma x^2}{N}}$$

$$S_x = \sqrt{\frac{6225}{52}}$$

$$S_x = \sqrt{120.29}$$

$$S_x = 10.97$$

$N_X = 52$ $\quad \bar{X} = 64.4$ $\quad S_X = 10.97$

$N_Y = 1000$ $\quad \bar{Y} = 65.75$ $\quad S_Y = 10.96$

TABLE IV - Continued

$$\text{Variance} = \frac{\left[(N_1 - 1)\,(S_1)^2\right] + \left[(N_2 - 1)\,(S_2)^2\right]}{(N_1 + N_2) - 2}$$

$$\text{Var} = \frac{\left[(55)\,(10.97)^2\right] + \left[(999)\,(10.96)^2\right]}{(1056) - 2}$$

$$\text{Var} = \frac{\left[(55)\,(120.3)\right] + \left[(999)\,(120.1)\right]}{1054}$$

$$\text{Var} = \frac{6616.5 + 119{,}979.1}{1054}$$

$$\text{Var} = \frac{126{,}595.6}{1054}$$

$$\text{Var} = 120.1$$

TABLE IV - Continued

$$t = \frac{\bar{Y} - \bar{X}}{\text{Var} \times \left| \frac{N_X + N_Y}{(N_X)\ (N_Y)} \right|}$$

$$t = \frac{65.75 - 64.4}{120 \times \left| \frac{56 + 1000}{(56)\ (1000)} \right|}$$

$$t = \frac{1.35}{\left| 120 \times \frac{1056}{56{,}000} \right|}$$

$$t = \frac{1.35}{\left| 120 \times .019 \right|}$$

$$t = \frac{1.35}{2.28}$$

$$t = \frac{1.35}{1.51}$$

$$t = .894$$

The final analysis was conducted to compare the success in employment of young deaf adults to the normal, hearing population (using given norms) as tested by the Minnesota Satisfactoriness Scales. The statistical procedures used included finding the mean and standard deviation of the scores of the hearing impaired workers, and finding the variance and t score in comparing the difference between the means of the hearing and hearing impaired population.

The data in TABLE IV supports the second hypothesis that there is no significant difference between the success in employment of the hearing impaired (X) and success in employment of normal, hearing workers (Y). The mean and standard deviation of X was found to be 64.4 and 10.96 respectively, while the mean and standard deviation of Y was given as 65.75 and 10.96. The t value of .894 was not significant at the .05 level, which supports the hypothesis that there is no significant difference between the success in employment of hearing impaired workers and normal hearing workers.

Summary of Data

In the investigation of the success in employment of hearing impaired workers, the following statements can be made:

(1) No significant correlation was found between the hearing impaired workers' communication skill and success in employment as measured by the Employer Survey.

(2) No significant correlation was found between the hearing impaired workers' communication skill and success in employment as measured by the Minnesota Satisfactoriness Scales.

(3) No significant correlation was found between the hearing impaired persons' speech skills and success in employment, as measured by the Minnesota Satisfactoriness Scales.

(4) No significant difference was found between the success in employment of hearing impaired workers and the success in employment of normal, hearing workers.

CHAPTER V. CONCLUSIONS AND RECOMMENDATIONS

Introduction

This chapter presents the discussion and analysis of the findings of the study, the conclusions, and recommendations.

Discussion and Analysis

1) The research sample was not indicative of the target population. An expected cross-section of residential and day school students and all levels of hearing loss was not attained. As a result, 91% of the population graduated from residential programs for the deaf, while 82% of the population were profoundly deaf (having a loss of 70 decibel or greater).

(2) A factor affecting the failure of finding a significant relationship between communication skills of young deaf adults and their success in employment was the difficulty involved in evaluating communication of the deaf. There are many variables as to the mode of communication (oral, manual, etc.), the degree of hearing loss, and the person to whom the deaf person is talking (deaf or hearing). A deaf person might communicate orally to his hearing co-workers and supervisors, while communicating manually to his teachers and deaf friends.

It is believed by this researcher that the communication skill score given to the deaf employee during the interview does not indicate his skill of communication on the job with the hearing personnel.

(3) In the majority of the cases (80%), the entry job did not require the use of communication to any significant extent. For instance, a printer does not need to communicate well to be successful at his job. Therefore, his skill in communication would not play an important role in determining his job success. Since most of the hearing impaired workers were employed in positions where they would not have to communicate to perform their job responsibilities well, their skill in communication would not have a

significantly high relationship to their success in employment.

Conclusions

1) The data presented would seem to indicate that the degree of communication skills in young deaf adults is not significantly related to their success in employment as measured by both the Employer Survey or the Minnesota Satisfactoriness Scales.

2) The hearing impaired workers' skill in using speech has no relationship to the successfulness of employment.

3) Deaf workers are rated by their employers as being equally successful at their jobs as hearing workers.

4) It was found that 14% of the hearing impaired workers obtained highly satisfactory ratings on the Minnesota Satisfactoriness Scales. Sixty-five percent received average ratings, while 21% obtained poor ratings from their employers.

Recommendations

1) For greater accuracy in further research, careful procedures are recommended in assessing communication skills of deaf employees while on the job. Communication should not be rated during the interview, but observed and scaled as the hearing impaired worker performs his duties and relates to others.

2) The Employer Survey should be correlated with the standardized Minnesota Satisfactoriness Scales to establish the relationship between the two instruments.

3) It is recommended that further research be conducted to analyze the relationships of communication skills in young deaf adults, and the individual factors of employment success, as found in the Minnesota Satisfactoriness Scales (Performance, Conformance, Dependability, and Personal Adjustment).

4) Research is recommended to analyze the relationships between communication skills of young deaf adults and the individual occupational groups as found in the Minnesota Satisfactoriness Scales. This could lend information to the value of communication skills in different occupational areas.

APPENDIX A

EDUCATIONAL HISTORY FORM

_____
Last Name First Middle

_____ _____
Address of Graduate Telephone of Graduate

_____ _____
Address of Parents Telephone of Parents

_____ Sex: Male_____ Female _____
Social Security Number

Describe Secondary Educational Program (i.e. vocational, academic etc.) _____

_____

_____

Number of years in Vocational Program_____ Name and type of_____
Number of hours per week _____ Program

Hearing loss:
right ear_____decibels left ear_____decibels best by normal average _____decibels.

Check one: 1. Mild ( )
2. Moderate ( )
3. Severe ( )
4. Profound ( )

Intellectual Information:
I.Q._____ Name of Test_____ Date _____
(1) Very Superior ( )
(2) Superior ( )
(3) Bright Normal ( )
(4) Average ( )
(5) Dull Normal ( )
(6) Marginal ( )
(7) Mentally Defective ( )

Achievement level upon finishing school:

Reading level_____ Math level_____ Language level_____
Other_____

Communication Information:

Communication Information: Please check methods of communication utilized by the student.
manual communication_____ speechreading_____ speech_____ writing_____

Hearing_____ gestures _____

Please give a short case history description of this student including the abilities, attitudes methods of communication, adjustment with hearing loss or any other information you feel pertinent.

STUDENTS ABILITY TO UNDERSTAND QUESTIONS

ABILITY TO UNDERSTAND QUESTION	FREQUENCY
SUBJECT SEEMED TO UNDERSTAND THE QUESTION VERY WELL WITHOUT INTERVIEWERS HELP	_____
SUBJECT UNDERSTOOD QUESTION AFTER INTERVIEWER REPEATED THEM, INTERPRETED THEM, OR OFFERED EXAMPLES	_____
WITH HELP, SUBJECT UNDERSTOOD ONLY SOME OF THE QUESTIONS	_____
WITH HELP SUBJECT UNDERSTOOD HARDLY ANY OF THE QUESTIONS	_____

MODES OF COMMUNICATION USED AT THE INTERVIEW

MAJOR MODE	QUALITY		
	GOOD	FAIR	POOR
SIGN LANGUAGE WAS THE PRIMARY MODE			
FEW SIGNS IN TALKING			
TALKING ONLY			
WRITING ONLY			
FINGERSPELLING			
TOTAL COMMUNICATION			
INTERPRETER			

PERMISSION TO INTERVIEW STUDENT

1. Read the following statement to the student:

The Pennsylvania Department of Education and Bloomsburg State College, in cooperation with training institutions of the deaf, are conducting a follow-up survey of hearing impaired young adults. This survey is part of an effort to gain some much needed knowledge about hearing impaired persons and provide some new insights into methods to improve the educational opportunities for all hearing impaired persons.

We hope that you will assist in our research by allowing me to ask you some questions about your educational program. All the information which you give to me will be held strictly confidential and will only be used by those working on the study to prepare statistical summary information. All of the information will be analyzed on a collective basis and no individual or agency will be named.

Students Name Date

Interviewers Name Date

EMPLOYERS PERMISSION

1. Give student the students copy of the employer form.

"I have read the employer survey form, understand it and give my permission to the interviewer to interview my employer."

Students Name Date

Interviewers Name Date

STUDENT QUESTIONNAIRE

Name _____ _____
Last First Middle Initial

Married Name _____
Last First Middle Initial

School Residential ( ) Day Student ( ) Day School ( ) Day Class ( ) Public ( ) School

Home Address _____ _____ _____
Street City State-Zip Code

Parent Address _____ _____ _____
Street City State-Zip Code

Employer Name _____

Employer Address _____

Birth Date: _____ Sex _____ Soc. Sec. No. _____

Yr. Graduated _____ Course _____

Interviewer _____ Date _____

1. Marital Status: Married( ) Single( ) Separated( ) Divorced( ) Widowed( )

2. Does your spouse have a hearing loss? Yes( ) No ( ) Number of children _____ Number of children that have a hearing loss _____

3. Does your father have a hearing loss? Yes( ) No( ) Does your mother have a hearing loss? Yes( ) No( )

4. How would you describe your present relationship with your parents? Very Successful( ) Somewhat Successful( ) Somewhat Unsuccessful( ) Very Unsuccessful( )

5. Number of friends that have hearing loss. Deaf Friends( ) Hearing Friends( )

6. Number of memberships in clubs. Deaf Clubs _____ Hearing Clubs _____

7. Hearing aid, is wearing a hearing aid( ), is not wearing a hearing aid( ), does own hearing aid( ), does not own a hearing aid( )

8. What did you like about your educational program? _____

9. What did you dislike about your educational program? _____

10. Were you ever informed about the educational or vocational programs available to you? Yes ( ) No ( ) If yes, who informed you? _____

11. Do you feel you had enough information for selecting a senior high program in college prep or vocational education? If yes, explain the type of information received._____

_____

12. Are you now self-supportive? Yes ( ) No ( ) If no, explain why. _____

_____

13. Do you feel your vocational training in senior high was adequate for today's job market? If yes, explain why you feel training was adequate.

_____

_____

If no, explain why it was not adequate._____

_____

14. If employed, please answer. Present job_____

15. Do you have a drivers license. Yes ( ) No ( ) If so, who instructed you?

_____

Do you own a car? Yes ( ) No ( )

16. Respond to the following communication information:

	Good	Average	Poor
manual communication	( )	( )	( )
speechreading	( )	( )	( )
speech	( )	( )	( )
writing	( )	( )	( )
hearing	( )	( )	( )
gestures	( )	( )	( )

A. Mark each that refers to you

( ) I work full time.
( ) I work part-time
( ) I do not work, but am looking for a job.
( ) I do not work.
( ) I take care of my house all the time.
( ) I go to college full time.
( ) I go to college part-time.
( ) I go to a vocational school full time.
( ) I go to a vocational school part-time.

B. (2) Did anyone at your school talk to you about what you would do after you finished school? Yes ( ) No ( ) If yes who_____

(3) Did your school give you a list of bosses who need workers to hel you find a job? Yes ( ) No ( )

(4) Did any possible bosses offer you a job before you left school? Yes ( ) No ( )

(5) Did you get a job because of a boss talking to you before you left school?
Yes ( ) No ( )

(6) Did your school give you a lot of help in finding a job?
Very much help ( ) Some help. ( )
Much help. ( ) No help. ( )

(7) When you left school, did you want a job doing what you did in school?
Yes ( ) No ( )

(8) Do you still want a job doing what you did in school? Yes ( ) No ( )

C. (9) Where do you work now?

Name_____
Address_____
_____

Same county as school? Yes ( ) No ( )
Another county near the school? Yes ( ) No ( )
Some other county in Pennsylavnia? Yes ( ) No ( )
Another state near Pennsylvania? Yes ( ) No ( )
Another state not near Pennsylvania? Yes ( ) No ( )

(10) Did you have a full time job before you left high school? Yes ( ) No ( )

(11) How long after you left school did you start your first full time job?

( ) Right away	( ) 6 weeks	( ) 12 weeks	( ) more than 16
( ) 2 weeks	( ) 8 weeks	( ) 14 weeks	
( ) 4 weeks	( ) 10 weeks	( ) 16 weeks	

(12) How much money do you make a month before money is taken out for taxes?

( ) below $400	( ) 500 - 549	( ) 650 - 699	( ) more than 800
( ) 400 - 449	( ) 550 - 599	( ) 700 - 749	
( ) 450 - 499	( ) 600 - 649	( ) 750 - 800	

(13) Did your school do a good job in training you for the job you have now?
( ) very good training for present job
( ) good training
( ) not so good
( ) bad training

(14) What kind of job do you do?_____

(15) Do you use what you learned in school in the job you have now?
( ) The same thing as you did in school.
( ) Almost the same thing you did in school.
( ) Some of the things you did in school.
( ) Not what you did in school.

(16) What was the reason for <u>not</u> getting a job like you were trained for in school?
( ) I did not want to do what I was trained for.
( ) I tried, but could not get a job in what I was trained for.
( ) I did not think I learned enought to get a job in what I was trained for.
( ) The pay was not enough.
( ) Too little opportunity for advancement.
( ) I would not be able to get a better job
( ) I did not like the working conditions
( ) I got a chance for a better job.

(continued on next page)

(16) ( ) I was not able to work in the apprentice program.
( ) Other

(17) How did you get your first full time job after you left school?

( ) Your school helped you
( ) Your vocational teacher helped you.
( ) Your counselor
( ) Other teacher
( ) Your family, parents
( ) Your friends
( ) By yourself
( ) Through an office at school
( ) Through an office of the state
( ) Private employment agency
( ) Thru school placement office

(18) What kind of school do you go to now? Is it in Pennsylvania? Do you live at home or at school? Does what you're studying now have anything to do with what you were trained for in high school?

( ) Community College
( ) Private 2 year College
( ) State Coll. Branch Campus
( ) State Coll. Main Campus
( ) Private 4 year College
( ) Private Business School
( ) Private Technical School
( ) Area Vo-Tech School
( ) Other School

Location

( )In state
( )Out of state

Residence

( ) At home
( ) At School

Name and Address_____

_____

_____

Relation

( ) Related

( ) Unrelated

This is a scale. Please answer the questions on this scale. The questions tell us what you like about your job. They tell us what you don't like about your job. This scale will be sent to all hearing impaired people in Pennsylvania. We want to find out what hearing impaired people like and dislike about their jobs. This is confidential. No one will see this except us. We will not show it to your employer.

Directions:

There are 20 questions below. Read each question slowly. Take your time. Think about each question. Fill in the circle that tells how you feel about the sentence. The circles are not the same. The circles have these meanings or definitions.

		Sign
A	means I like this very much	(Very Good)
B	means I think this is okay	(ok)
C	means I can't decide.	(don't know)
D	means I don't like this	(don't like)
E	means this bothers me a lot	(very bad)

Please fill in one circle after each question.

	A	B	C	D	E
MY JOB:					
1. Keeps me busy (activity	( )	( )	( )	( )	( )
2. Lets me work alone	( )	( )	( )	( )	( )
3. Lets me do different things	( )	( )	( )	( )	( )
4. Makes me feel important outside of work	( )	( )	( )	( )	( )
5. Lets me do things I think are right	( )	( )	( )	( )	( )
6. Is a sure job-I will have this job in the future	( )	( )	( )	( )	( )
7. Lets me help other people	( )	( )	( )	( )	( )
8. Lets me tell other people what to do	( )	( )	( )	( )	( )
9. Lets me use what I know	( )	( )	( )	( )	( )
10. Is good pay-pays good	( )	( )	( )	( )	( )
11. Makes me work hard (work incentive)	( )	( )	( )	( )	( )
12. Lets me try things my way	( )	( )	( )	( )	( )
13. Is a good place to work	( )	( )	( )	( )	( )
14. The people get along good	( )	( )	( )	( )	( )
15. Tells me I do good work	( )	( )	( )	( )	( )
16. Makes me feel I do good work	( )	( )	( )	( )	( )
17. What do you think of company rules?	( )	( )	( )	( )	( )
18. Can yo get better job here?	( )	( )	( )	( )	( )
MY BOSS:					
1. Is fair to the workers	( )	( )	( )	( )	( )
2. Knows what he's doing	( )	( )	( )	( )	( )

EMPLOYER SURVEY

Employer: _____

Address: _____
Street City State-Zip Code

Telephone: _____ Date: _____

No. of Employees: _____ No. of hearing impaired employed: _____

Employee: _____ Interviewer: _____

Entry Job: _____

1. Was he/she properly trained? (high school program)
   A. Skillwise _____
   B. On appropriate equipment _____
   C. Additional training needed _____
2. Was job reengineered? Yes ( ) No ( ) To what extent? _____
3. What relationship is there between the disability and job employee is performing?
   _____
4. Has employee made any advancement?
   A. Skillwise _____
   B. Job classification _____
   C. Salary _____
5. Success of our graduates in comparison to hearing workers.

	Good	Average	Poor
A. Quality of work	( )	( )	( )
B. Quantity of work (productivity)	( )	( )	( )
C. Handling of equipment	( )	( )	( )
D. Attention to work	( )	( )	( )
E. Attitude toward work and initiative	( )	( )	( )
F. Attitude toward supervision	( )	( )	( )
G. Relations with co-workers	( )	( )	( )
H. Accident rate	( )	( )	( )
I. Absenteeism	( )	( )	( )

6. Would you consider employing another hearing impaired/handicapped person? Yes ( ) No ( )
7. If answer is yes, what kind of job? _____
8. If answer is no, why not? _____
9. Have you had previous experience with the hearing impaired/handicapped other than this employee? Yes ( ) No ( ) What? _____
10. Do you employ other handicapped workers? Yes ( ) No ( ) Number ( )
11. How did you find this person for employment? (Agency, Friend, Newspaper, School, etc.) _____
12. Do you feel the hearing impaired individual has had a problem socially adjusting within the company? Yes ( ) No ( ) If yes, what steps were taken to help with the problem? _____
    _____

APPENDIX E CONSISTING OF MINNESOTA SATISFACTORINESS SCALES WAS NOT REPRODUCIBLE AND WAS REMOVED FROM THIS DOCUMENT PRIOR TO ITS BEING SUBMITTED TO THE ERIC DOCUMENT REPRODUCTION SERVICE.

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